IN THE ABSTRACT

Please substitute the attached abstract of the disclosure for the abstract as originally filed.

REMARKS

The above amendments are being made to place the application in better condition for examination.

Entry of the amendment is respectfully solicited.

Respectfully submitted,

Ronald E. Greigg Reg #20893
Attorney for Applicants
Registration No. 31,517
Customer No. 002119

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GREIGG & GREIGG, P.L.L.C.
1423 Powhatan Street
Unit One
Alexandria, VA 22314

Tel. (703) 838-5500
Fax. (703) 838-5554

REG/JLB/hhl

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Page 1, between the title and paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/DE 00/02056 filed on June 23, 2000.

[0000.6] BACKGROUND OF THE INVENTION

delete paragraph [0001] and insert the following new paragraph:

[0001] [Prior Art] Field of the Invention

between paragraphs [0002] and [0003], insert the following:

[0002.5] Description of the Prior Art

Page 2, paragraphs [0006] and [0007]:

[0006] [Advantages of the Invention] SUMMARY OF THE INVENTION

[0007] The method of the invention [having the characteristics of claim 1] has the advantage that the braking force of the wheel brake assembly can be increased beyond the value that it has in the quasi-static terminal state, and the braking action is improved substantially.

Page 3, paragraph [0010]:

[0010] The invention is based on the following [thought] concept: The wheel brake assembly is not absolutely rigid; even when embodied stiffly, it has some elasticity, against which the electric motor tightens the wheel brake assembly. The electric motor

upon tightening must also overcome friction, for instance of the gear and the spindle drive, and because of the increasing forces, this friction load increases as the tightening increases. At a high tightening force, the friction load is high; that is, a not insignificant proportion of the torque of the electric motor is consumed to overcome the friction, and only the torque of the electric motor beyond that proportion increases the tightening force further. When the quasi-static terminal state is reached, the moving parts of the wheel brake assembly come to a stop, and the friction changes into static friction, which is higher. A further increase in the braking force would be possible then only if the torque of the electric motor could be increased so far that the static friction is overcome, and that the moving parts of the wheel brake assembly move again.

Page 5, paragraphs [0012] and [0013]:

[0012] For actuating the wheel brake assembly in the release direction, the electric motor need not necessarily be supplied with current in the release direction; often, it suffices to interrupt its current supply or reduce it, before the electric motor is again acted upon with maximum current supply in the tightening direction in order to re-tighten the wheel brake assembly. Nor is the wheel brake assembly actually released; instead, the actuation in the release direction is so brief that the braking force is reduced, if at all, only imperceptibly. It is not the goal of the invention to reduce the braking force of the wheel brake assembly temporarily and then increase it again; instead, by actuating the wheel brake assembly in the release direction, any stresses in bearings, gears, guides and the like, which can occur in the quasi-static terminal state because of the high tightening force of the wheel brake assembly, are meant to be reversed, and the static friction is to be overcome. An explanation for why the braking force of the wheel

brake assembly does not decrease despite a brief actuation in the release direction could be hysteresis resulting from the elasticity of the wheel brake assembly. In any case, in experiments, no loss of braking force during the brief actuation of the wheel brake assembly in the release direction was measurable. This can be due to the fact either that the braking force in fact did not decrease, or that the decrease in braking force was less than the measurement precision and hence was insignificant. A perceptible reduction in the braking force during the actuation of the wheel brake assembly in the release direction would be quite worrisome to a driver and would moreover lengthen the braking distance, which should be avoided and is unwanted according to the invention. What is meant by the expression [in claim 1] that the braking force is reduced if at all only imperceptibly is that the wheel brake assembly is actuated in the release direction only so briefly that any stresses in the drive of the wheel brake assembly will be reversed and the static friction will change into a sliding friction.

[0013] The method of the invention can also be adopted for other mechanical systems involving friction and having spring elasticity and is not limited to wheel brake assemblies. [This is the subject of coordinate claim 2.] The above explanations on the wheel brake assembly, in particular on the electromechanical wheel brake assembly, logically apply here as well and will not be repeated at this point.

Page 6, delete paragraph [0014] and paragraph [0015] through [0017]:

[0014] [Advantageous features and refinements of the method of the invention are the subject of the dependent claims.]

[0015] For increasing the braking force incrementally, the method according to the invention [as defined by claim 3] is repeated multiple times. [According to claim 4, the] The method is repeated after a predetermined [tb] time after the onset of the re-tightening. This has the advantage that there is no need to determine or wait for whether the wheel brake assembly, after being re-tightened, has already come to a stop. [According to claim 5, the] The method is repeated if the wheel brake assembly/the system upon re-tightening has come to a stop or at least is virtually at a stop. In this way, each time the method is repeated a maximum increase in the braking force, or in the force exerted by the spring-elastic mechanical system that involves friction is attained.

[0016] Since the braking force, or the force exerted by the system, cannot be increased arbitrarily by the method of the invention but instead seeks to meet a limit value, the number of repetitions is limited [in accordance with claim 6].

[0017] According to [claim 7] one aspect of the invention, a distance that an actuating element of the wheel brake assembly covers in its actuation in the release direction is used as a standard for the actuation in the release direction. If the actuating element has traveled a fixed distance in the release direction, then the wheel brake assembly/the system is re-tightened. The travel of the actuating element in the release direction accordingly determines the brief period of time during which the wheel brake assembly/the system is actuated in the release direction. In this case, no time is measured. The actuating element can for instance be a rotor of the electric motor of the wheel brake assembly, which is rotated backward by a predetermined angle in order

to actuate the wheel brake assembly in the release direction.

Page 7, paragraphs [0018] through [0022]:

[0018] [Drawing] BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The invention will be described in further detail below in terms of an exemplary embodiment shown in the [drawing. Shown are] drawings, in which:

[0020] Fig. 1[,] is an overview of an electromechanical wheel brake assembly; and

[0021] Fig. 2[,] is a timing graph to illustrate the mode of operation of the method of the invention.

[0022] [Description of the Exemplary Embodiment] DESCRIPTION OF THE PREFERRED EMBODIMENT

Page 11, after paragraph [0031] insert the following new paragraph:

[0032] The foregoing relates to preferred exemplary embodiments of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.

Pag 14, abstract:

[Abstract] **ABSTRACT OF THE DISCLOSURE**

[The invention relates to a] A method for actuating [a wheel brake assembly, in particular] an electromechanical wheel brake assembly [(10)] or a mechanical system involving friction and having spring elasticity[. To] wherein, to increase a braking force once a quasi-static terminal state of the wheel brake assembly [(10)] is reached, the [invention proposes actuating the] wheel brake assembly [(10)] is actuated for a brief period of time in the release direction and then [to re-tighten it; the] retightened. The period of time of the actuation in the release direction is selected to be so brief that the braking force is reduced, if at all, only imperceptibly. [(Fig. 1)]